

NEW SPECIES OF CARABIDÆ IN THE SUBFAMILY
HARPALINÆ, CHIEFLY FROM WESTERN
NORTH AMERICA

BY EDWIN C. VAN DYKE

*University of California, Berkeley, California***Bembidium cœrulescens** Van Dyke, new species

Form moderately elongate, gracefully proportioned, slightly convex, shining, nigropiceous with a bluish luster above, especially on head and prothorax, the antennæ, palpi, tibiæ, and tarsi brownish. Head scarcely narrower than the prothorax at apex, alutaceous, eyes moderately prominent, antennæ slender, about one-half length of body, frontal grooves single, straight and shallow, mandibles prominent. Prothorax as wide as long, three-fourths as wide as elytra at base, narrower at base than apex; apex feebly emarginate; sides with the margins distinctly reflexed, moderately arcuate in front, gradually narrowed and sinuate posteriorly; hind angles slightly obtuse and not carinate; disc alutaceous with median longitudinal groove well impressed and abbreviated in front; anterior transverse impression well defined; area in front of it with a number of longitudinal rugæ; basal impressions broad, deep, indistinctly bistrate, the entire basal area rugose. Elytra elliptical, three-fifths as broad as long; humeri distinctly rounded; sides slightly arcuate anteriorly, more decidedly so posteriorly and but slightly sinuate in front of apex; disc finely striate, the striæ entire and with very vague punctures anteriorly, the outer ones less deeply impressed, the fifth terminating in a deep groove; third stria with first dorsal puncture slightly in front of the middle and second about one-fourth distant from apex; eighth stria at border of marginal groove, the intervals flat. Length, 7 mm.; breadth, 3 mm.

Holotype, male (No. 1818, Mus. Calif. Acad. Sci.), in my collection, kindly presented to me by Mr. Merton C. Lane, who secured it near the margin of the stream in **Niles Cañon, Alameda County, California**, December 27, 1919. Two paratypes captured at the same time are in Mr. Lane's collection.

This very graceful species looks not unlike a small specimen of *Platynus funebris* Lec. According to the arrangement of Roland Hayward,¹ it would have to be placed in his Group VII (*planatum*), and close to *funereum* Lec., though it is very much larger, almost as large, in fact, as *planatum* Lec. It resembles *nigrocœruleum* Hyd. only in color. It is also a more elegantly formed insect than any other in the group.

¹ "On the Species of Bembidium of America North of Mexico," by Roland Hayward. Trans. Am. Ent. Soc., Vol. XXIV (1897), pp. 32-143.

***Bembidium utahensis* Van Dyke, new species**

Form elongate, depressed, color dark rufous. Head large, but slightly narrower than the prothorax; eyes small and much flattened, hardly extending beyond the sides of the head; antennæ stout, reaching but two segments beyond the humeri; frontal impressions single, shallow and lunate; mandibles prominent, porrect; palpi rufocastaneous, the terminal joint of the maxillary palpi at least twice as long as the similar joint in *Bembidium laticeps* Lec. Prothorax almost a third broader than long, narrower than elytra at humeri; apex feebly emarginate; base just perceptibly arcuate; sides moderately arcuate in front, sinuate posteriorly and parallel for a short distance in front of base; hind angles right; lateral margin narrow; disc barely convex; median longitudinal groove well impressed, especially posteriorly, and almost completely; anterior and posterior transverse impressions obsolete; basal impressions deep, with double striæ vaguely defined, most of the basal area somewhat rugose. Elytra elliptical, somewhat more than a third longer than broad; humeri rounded but with prominent basal ridge running obliquely inwards, the margin fine; disc somewhat flattened, all striæ present, well impressed near suture, less defined laterally and apically, and finely punctate; third stria with two dorsal punctures, the first slightly in front of the middle, the second somewhat more than a fourth of the distance from apex; eighth stria in marginal groove. Length, 4.5 mm.; breadth, 2 mm.

Holotype, male (No. 1819, Mus. Calif. Acad. Sci.), in my collection, secured near **Salt Lake City, Utah**, by Professor R. P. Chamberlin, and kindly presented to me by Dr. William M. Mann. A second specimen was in the collection of Dr. Mann.

This beetle has its closest relative in *Bembidium laticeps* Lec. and belongs with that and *Bembidium puritanum* Hyd. It differs from the former by being larger with the prothorax more elongate and less broad, the elytra also more elongate, with all of the striæ well defined and finely punctured, whereas in the other the striæ are but vaguely defined. It is interesting to find the third member of this small group near Great Salt Lake, *laticeps* being found near the seashore in southern California and *puritanum* in Massachusetts.

***Trechus ruficollis* Van Dyke, new species**

Body rather stout and somewhat convex, shining, rufopiceous; head and prothorax rufous; antennæ, palpi, legs and epipleuræ castaneous. Head more than three-fourths as wide as prothorax; eyes moderately prominent; frontal sulci long, deep and semi-circular; antennæ moderately slender, segments definitely broadened out-

wardly, extending to second fourth of elytra. Prothorax small, not quite twice as wide as long; sides moderately arcuate anteriorly, sinuate posteriorly and straight and parallel near base; hind angles prominent and right, the lateral margin moderately reflexed; disc with the median longitudinal groove finely impressed, the anterior transverse impression vague, the posterior pronounced even at middle, the basal impressions moderately deep and diffuse. Elytra oval, somewhat truncate at base, almost twice as wide as prothorax and two-thirds as wide as long; disc with the three inner striæ very fine, though observable and complete and with slight indications of a fourth stria; third stria with three foveæ, the first one-fifth distant from base, the second at about the middle, and the third close to the apex. Length, 3.5 mm.; breadth, 1.75 mm.

Holotype and three paratypes, bearing the label, **Lawrence, Massachusetts**, found among a series of unplaced specimens in the entomological collection of Cornell University. They were part of the Crew collection. The holotype and one paratype will be deposited at Cornell University, and the two remaining paratypes will remain with me.

This species belongs in the series with *arizonæ* Casey, *hydropticus* Horn, *ovipennis* Mots., and *pomonæ* Fall, agreeing with all in the general form and degree of smoothness. It, however, differs from all by having shorter and heavier antennæ, the prothorax more decidedly sinuate posteriorly, approached slightly in this regard by *arizonæ* Casey, the hind angles more prominent, and by being bicolored, the rufous prothorax, in all specimens seen, strongly contrasting with the piceous elytra. It is possible that, in spite of the definite locality label, these specimens may have come from some other locality, for it seems strange that such a well-marked species should occur in Massachusetts and remain unknown so long. It does not seem to agree with any of the European species and, as stated, bears a strong resemblance to certain American species.

Patroboidea Van Dyke, new genus

Body very elongate, parallel and flattened. Head large, elongate, genæ prominent and long, reaching from the posterior margin of the eyes to the antennæ, head constricted posteriorly, with deep and broad frontal grooves and two supra-orbital setæ, one rather inconspicuous. Antennæ long, reaching to posterior third of body, moderately stout, arising under a feeble frontal ridge; first and second segments glabrous, the following fairly pilose; first robust, second small and transverse, third long, as long as the two following united and about five times as long as the second; segments three to six of

about equal length and breadth, seven to ten also of about equal length and breadth, but somewhat shorter than the preceding, the eleventh about as long as the third. Eyes poorly developed, projecting but little beyond sides of head, well removed from the mouth. Clypeus well developed, transversely depressed in front and with lateral setæ. Labrum short, broadly shallowly emarginate and plurisetose in front. Mandibles prominent, prognathous, feebly arcuate, acute and curved at tip, with setigerous puncture in scrobe. Maxillæ slender, acute at tip, ciliate with stiff hairs on inner side, the outer lobe biarticulate; palpi rather long, the terminal segment gradually tapering to apex, slightly longer than preceding, the point subacute; penultimate not hairy. Submentum broad, its basal suture distinct, deeply emarginate and with broad truncate lobe at middle; epilobes dentiform; ligula moderately prominent, rounded and bisetose at apex; paraglossæ broad, rounded at apex and very little longer than the ligula; palpi of moderate length, the terminal segment conical, somewhat blunt at apex and slightly longer than preceding segment.

Prothorax flattened, with side margin narrow and with setigerous punctures near the front and at hind angles. Body not pedunculate, scutellum distinct. Elytra flattened, elongated, more or less elliptical, not margined at base; sides narrowly inflexed; margin posteriorly entire and without internal plica; disc with nine complete striæ, counting the marginal; first and second and the third and fourth united at the apex; third with three dorsal punctures, the first one-fourth distant from base, the second at about the middle, and the third one-fourth distant from apex. Prosternum moderately separating the coxæ and declivous at apex. Mesosternum narrowly separating the coxæ. Metasternum long, the epimeron short, the posterior coxæ contiguous. Anterior tibia of the male somewhat angulated, the emargination deep and about one-third distant from apex; tarsi slightly dilated and squamose beneath.

Genotype, *Patroboidea rufa* Van Dyke, new species.

This genus, without doubt, belongs in the tribe Pogonini, as defined by Horn,² and in the first of his groups, the group Pogoni. It belongs near the genus *Patrobus*, and in general has much the appearance of the flatter members of that genus, those classed as *Platidius* by Chaudoir, but it is much smaller than any of the species included within that, and in fact looks much like the European *Thalassophilus longicornis* Sturm. With this last, it agrees as regards general size, shape and color, small eyes, and heavy and long antennæ, but it differs in lacking the basal striæ of the elytra and in having a very small second

² "On the genera of Carabidæ, with special reference to the fauna of Boreal America," by George H. Horn, M. D., Trans. Am. Ent. Soc., Vol. IX (1881-82), p. 135.

segment and very long third segment to the antennæ, in this last regard resembling *Pogonus*. From *Pogonus*, it differs primarily in having the genæ well developed and elongated, the constriction of the head, therefore, not just back of the eyes but far removed, in having the eyes poorly developed and the palpi, both maxillary and labial, quite long and slender and subacute at apex, in contrast to the truncated palpi of the other.

Patroboidea rufa Van Dyke, new species

Elongate, quite parallel, much flattened, rufous, head somewhat darkened. Head elongated, somewhat elliptical, smooth, impunctate; frontal impressions deep, straight, extending back as far as eyes; mandibles long, porrect, and but little curved except at apex; eyes small, projecting but little beyond sides of head; antennæ rather stout, long, extending to beyond middle of elytra. Prothorax slightly broader than long and about as long as head, including mandibles; base narrower than apex; apex slightly emarginate; base truncate; sides moderately arcuate in front, sinuate posteriorly, the hind angles prominent and right-angled; disc flattened, smooth, with median longitudinal groove deep and complete, anterior transverse impression vague, the posterior mainly indicated by a series of well marked punctures, the basal impressions deep and broad posteriorly. Elytra slightly longer than head and prothorax combined, about one-third wider than prothorax, base emarginate, the humeri rounded; sides almost parallel, but slightly arcuate; disc flattened; striæ well defined, complete and with but a few indistinct punctures near base; scutellar striæ fine. Body beneath smooth and shining. Length, 5.5 mm.; breadth, 2.25 mm.

Holotype, male (No. 1820, Mus. Calif. Acad. Sci.), in my collection, taken by myself from beneath a piece of driftwood on the sandy beach along the Snohomish River near **Monroe, Washington**, July 4-14, 1905. A second specimen, which I have designated as a paratype, was collected along Spious Creek, British Columbia, May 30, 1921, by Mr. Ralph Hopping, and is now in his collection.

PTEROSTICHUS BRUNNEUS Dej.

This species, about which there has long been much confusion, due chiefly to the fact that neither Leconte³ nor Horn knew the species, is well defined by both Dejean⁴ and Manner-

³ "The Pterostichi of the United States," by John L. LeConte, Proc. Acad. Nat. Sci., Phil., 1861, p. 312. The specimen, sent to Dr. LeConte by Chaudoir as the type of *Pterostichus brunneus* Dej., could not have been that, but probably a specimen of *Pterostichus castaneus* Dej. Chaudoir himself later insisted that *brunneus* and *castaneus* were quite distinct.

⁴ "Species General des Coleopteres," by M. le Compte Dejean.

heim,⁵ and is easily recognized once we compare typical specimens with the original description. It was described from Sitka, but is a common species on the islands off the coast of southeastern Alaska and on Orcus Island in Puget Sound, as well as on the Selkirk Mountains of British Columbia and the Cascades of Washington and Oregon, at least as far south as Mt. Jefferson. In the northern Cascades it lives as does *Pterostichus protractus* Lec. in the Sierras, in the woods under old logs. Structurally, it is about midway between *castaneus*, which is generally to be found in the same environment with it, and *protractus*, and in fact if found in the Sierras would no doubt be taken for a small specimen of the latter. It is most decidedly not the same as *castaneus*, as stated by LeConte,³ nor synonymous with *scutellaris*, as given by Horn.⁶ *Pterostichus scutellaris* Lec. is nothing more than a fully pigmented or melanotic offshoot of *amethystinus*. This last, a common species of the dense forests of the Pacific Northwest, extends into California and along the coast only so far as northern Sonoma County, where *scutellaris* takes its place, and continues on to Monterey County. There seems to be a distinct cleavage between the two species, and the fact that in ancient times a gulf existed at about the place where one replaces the other might account for this.

Pterostichus nigrocæruleus Van Dyke, new species

Moderately elongate, somewhat flattened, gracefully proportioned, head and pronotum shining black, elytra violet to bluish black, antennæ, legs and under surface piceous to rufopiceous. Head rather large, almost two-thirds breadth of prothorax, very smooth and shining, frontal grooves long and well impressed; the mandibles prominent and noticeably hooked at apex; eyes moderately prominent; antennæ slender, extending several segments behind the base of the prothorax. Prothorax slightly wider than long, anterior angles prominent, sides broadly arcuate anteriorly, sinuate posteriorly, hind angles right-angled; lateral margin broad and reflexed; disc slightly convex, very smooth and shining, median longitudinal groove deep, the anterior and posterior transverse impressions distinct; basal impressions single, long and deep, the basal area external to these flattened, not margined, and slightly reflexed in a wing-like manner. Elytra nearly two-fifths longer than head and prothorax combined,

⁵ "Beitrag zur Kafer-Fauna der Aleutischen Inseln, der Insel Sitka und Neu-Californiens," by Graf. C. G. Mannerheim, Bul. Moscow, Vol. XVI (1843), p. 201.

⁶ "Random Studies in North American Coleoptera," by George H. Horn, Trans. Am. Ent. Soc., Vol. XIX (1892), p. 41.